

THIS REPORT CONTAINS ASSESSMENTS OF COMMODITY AND TRADE ISSUES MADE BY USDA STAFF AND NOT NECESSARILY STATEMENTS OF OFFICIAL U.S. GOVERNMENT POLICY

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Guatemala

Agricultural Biotechnology Annual

De Facto Moratorium

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Report Highlights:

Guatemala does not allow commercialization of genetically engineered (GE) plants. Since 2006, the Guatemalan Ministry of Agriculture, Livestock, and Food (MAGA) has maintained a regulation for field trials and commercialization of seeds for export purposes only. Producers are not interested in submitting applications for field trials if the GE crops produced in Guatemala cannot enter domestic commerce. Despite this de facto moratorium, the country is a large importer of GE plant derived products for both human consumption and for animal feeding. Given the fact that almost half of Guatemala's population lives in poverty and 49% of children under age of five suffer from chronic malnutrition, Guatemala is a critical food aid recipient. A large portion of Guatemala's agricultural producers—especially subsistence producers of basic grains—have not actively adopted agricultural technologies, their resulting farming practices have low productivity. Given Guatemala's difficulties

with food insecurity and acute and chronic malnutrition, the labeling of GE food products is not a concern.

Section I. Executive Summary:

Guatemala, at present, allows the importation of genetically engineered (GE) agricultural and food products, but has not approved the use of GE plants for agricultural production. Guatemala is a net importer of animal feed. Despite claims of the Council of Protected Areas (which represents the Cartagena Protocol in the country) permanently raising concerns on risk of biodiversity losses due to the potential introduction of GE plants, Guatemalan society's main priorities and concerns are clearly centered on civilian security and food security.

Section II. Plant Biotechnology Trade and Production:

- a. **PRODUCT DEVELOPMENT:** There is no legal cultivation of GE crops in Guatemala. Local development is not incentivized under present regulation.
- b. **COMMERCIAL PRODUCTION:** Guatemala allows for commercial production of GE plants for seed production and export purposes exclusively.
- c. **EXPORTS:** Though Guatemala allows for GE seed exports, Guatemala has not produced nor exported any GE seeds.
- d. **IMPORTS:** Guatemala continues to be a net importer of animal feed. In CY2012, Guatemala imported close to 690,817 MT of coarse grains valued at \$217 million, from U.S., Brazil, and Argentina, countries which use GE technology for grain production. Imports of soybean meal from the U.S. reached a record high of 299,253 MT valued at \$150 million. Corn is the most widely imported grain: the U.S. exported 391,381 MT of yellow corn and 35,783 MT of white corn. White corn is used by the food industry, together with soy, to prepare foods and beverages, including corn flour which is a major staple.
- e. **FOOD AID RECIPIENT COUNTRIES:** Guatemala is a major food aid recipient country due to the fact that Guatemala has the highest rate of chronic malnutrition in Latin America and has the fourth highest rate in the world. Guatemala receives \$200 million on a yearly basis in food aid from the United States alone which is a mixture of donated and monetized commodities. Food donations, which consist largely of beans, corn-soy blend, rice, and vegetable oil, account for almost 50 percent of the value of food aid received by Guatemala. As a result of such food aid, acute and chronic malnutrition has decreased in the areas of intervention, and food donations that contribute to school feeding programs have increased school retention rates in primary schools.

Section III. Plant Biotechnology Policy:

- a. **REGULATORY FRAMEWORK:** Ministerial Agreement 386-2006 allows for field trials and the commercial production of GE seeds for export purposes only. The Guatemalan Ministry of Agriculture, Livestock, and Food (MAGA) is responsible for approving risk analysis conducted by interested parties. The Institute of Agricultural Science and Technology (ICTA) of MAGA is responsible for verifying on site protocols presented as part of the risk analysis. The regulation is outdated and was drafted to comply with the Cartagena Protocol rather than to promote a

science based approach towards biotechnology. Guatemala has a general environmental law applicable to any commercial activity including agriculture and calls for an environmental study to approve any commercial operation. Environmental studies can be less or more complex and costly depending on the risk-category of the economic activity. At present, the environmental law considers GE plants as a high-risk category activity potentially placing a greater amount of scrutiny on the technology.

- b. **APPROVALS:** Guatemala has not approved any GE plant events.
- c. **FIELD TESTING:** In 2004, MAGA approved field trials of the Yieldgard gene in corn for Lepidopteron resistance, and the Liberty gene in cotton for glufosinate resistance, which are both deregulated events in the United States. The field trials were carried out but the process was so lengthy and time consuming that once finalized, the products were no longer of commercial interest. Del Valle University of Guatemala (UVG) developed ring-spot resistant papaya which has not received approval to be tested in the field which has resulted in a discouraging environment for Guatemalan biotech research.
- d. **STACKED EVENT APPROVALS:** Ministerial Decree 386-2006 makes no reference to single or stacked events.
- e. **ADDITIONAL REQUIREMENTS:** Guatemalan regulations allow for MAGA to consider any additional requirements during the process of field trial approvals, including carrying out additional research to establish biodiversity base lines.
- f. **COEXISTENCE:** The subject of coexistence has not been addressed by any legal means; however, it continues to be a subject that is closely associated with biotechnology. At present, however, commercially available GE corn is most suitable for Guatemala's lowlands and not for the Western Highlands due to elevation. The lowland regions of Guatemala, mainly the South Coast and the Northern Department of Petén, have been home to the use of hybrid corn varieties for over 30 years and currently boast the highest yields. In comparison, there are currently no GE corn options for the Western Highlands where corn production is marked by the use of saved or *creole* seeds which produce drastically reduced corn yields when compared to hybrids.
- g. **LABELING:** Guatemala is a member of the World Trade Organization (WTO) and actively participates in Codex, although sound participation has waned under the current Government. Currently, Guatemala largely implements Codex guidelines regarding food safety and standards. The food processing industry in Guatemala is openly opposed to the labeling of GE food products.
- h. **TRADE BARRIERS:** Guatemala has a de facto moratorium in place for commercial production of GE plants.
- i. **INTELLECTUAL PROPERTY RIGHTS (IPR):** IPR in Guatemala has gone through several amendments as a result of global trade and free trade agreements. As a result of such commercial engagement, Guatemalan became a member of the International Union for the Protection of New Varieties of Plants (UPOV) in 2009, but the implementation of a sound seed law within Guatemala is still in its draft version and has recently been bolstered with the help of assistance of the Food and Agriculture Organization of the United Nations (FAO). Guatemala has been discussing the need for a Seed Law for the past three years, without concrete results at present. The Congress in Guatemala is not moving forward technical laws at present; instead, they are focused on laws related to transparency, security, and free markets, which are of higher importance for the international community.
- j. **CARTAGENA PROTOCOL RATIFICATION:** The Guatemalan Congress approved the Cartagena Protocol in September 2003 by Legislative Decree 44-03, which was published in the

official newspaper, the *Diario de Centro America*, Volume CCLXXII N. 72, on October 13, 2003. The Protocol was ratified and took effect in January 2005. The Point of Contact for the Cartagena Protocol in Guatemala is the Technical Office for Biodiversity (OTECBIO), which is part of the Council of Protected Areas (CONAP). CONAP is well known for pushing for restrictive regulations, though they are not a regulatory body and its authority is clearly outside of the regulation for agricultural biotechnology or any other agricultural technology. The Guatemalan academia, the private sector in Guatemala, and even the great majority of public agencies openly oppose CONAP's non science based proposals and agenda.

- k. **INTERNATIONAL TREATIES:** Guatemala is a member of the WTO and its bodies (OIE, IPPC, CODEX), including IPR and UPOV. Guatemala's has an active trade policy agenda which has resulted in the signing and implementation of free trade agreement with many countries over the recent years including, the United States, Central America, the Dominican Republic, Mexico, Panama, Taiwan, Colombia, Chile, and recently in 2013, Peru and the European Union (EU). Guatemala has partial agreements with Belize, Cuba, and Venezuela. Guatemala has a Preferential System with Canada and EU, together with investment agreements with Germany, France, Israel, Italy, Holland, the Czech Republic, Switzerland, Sweden, Argentina, Belgium, Luxemburg, Chile, Taiwan, Korea, Cuba, Spain, and Finland. Guatemala also participates within the United Nations and the Organization of American States.
 - l. **RELATED ISSUES:** Guatemalan farmers strongly support adoption of biotechnology, especially corn producers, given the fact that the neighboring country Honduras has been producing high quality corn (low grain damage with low aflatoxin and mycotoxin levels) and at lower prices for the past thirteen years due to biotechnology, for which the food industry and even the corn flour producers prefer Honduran corn. Groups in opposition are those that receive financial support from non-governmental organizations (NGOs) that oppose biotechnology, but do not represent serious stakeholders' position.
- MONITORING AND TESTING:** Given the fact that biotechnology is not an issue in Guatemala's because of more pressing priorities, Guatemala has no monitoring and testing for GMO products.

Section IV. Plant Biotechnology Marketing Issues:

- a. **MARKET ACCEPTANCE:** Guatemala's agricultural markets are marked by asymmetric information which lays the groundwork for market failures at all levels. Knowledge of biotechnology by farmers varies from the well informed to those who heard something many years ago about the negative health effects of biotech crops, to some who may illegally import biotech seed varieties used legally by Honduran farmers. Given Guatemala's food security concerns and high level of chronic malnutrition, marketing and labeling of food products is not a priority at present. Food safety concerns are related to microbiological contamination of food due to contaminated water sources for agriculture. Food poisoning due to Salmonella, E. coli, and other food borne pathogens, including parasites, are of concern.
- b. **PUBLIC/PRIVATE OPINIONS:** Both at the public and private level, opinions on biotechnology have grown more educated with time. Guatemalan universities—both public and private—supporters of the technology. Overall, there is a generalized concern for the low agricultural productivity and low technology adoption, which if modified could increase production and support resolving food security issues. The public and private sector, including the academia, have strongly opposed law proposals or policies promoted by CONAP which have

sought to discourage potential adoption of the technology. Additionally, the Guatemalan Ministry of Environment and the Ministry of Economy have increasingly see biotechnology as a tool to help agricultural systems adapt to climate change.

Section V. Plant Biotechnology Capacity Building and Outreach:

- a. **ACTIVITIES:** Guatemalans have received capacity building through different institutions. Some Guatemalans have applied for short course scholarships in U.S. universities in order to understand both the technology and its science based regulation. Since 2004, the UN Global Environmental Foundation (GEF-UNEP) has financed CONAP with different projects in Guatemala aimed at developing a national biosafety framework. Such projects have lacked the support of major stakeholders who have worked in clear opposition of CONAP's strategy to force a restrictive law or regulation. The Zamorano University in Honduras, with support of the Inter American Institute for Cooperation in Agriculture (IICA), hosted a regional workshop in 2012 to discuss the need to better coordinate biosafety discussions within Central America and Panama. The workshop presented a more in depth and complete overview of the status of biotechnology adoption and biosafety implementation in the different countries in Latin America.
- b. **STRATEGIES AND NEEDS:** Biotechnology is not high on any political agenda at the government level. The whole academia and the private sector are supportive of the technology. Given the complicated political agenda at present, none of the sectors are interested in moving forward with technical discussions.

Section VI. Animal Biotechnology: PRODUCTION AND TRADE

- a. **BIOTECHNOLOGY PRODUCT DEVELOPMENT:** Guatemala does no GE animal research or development.
- b. **COMMERCIAL PRODUCTION:** Guatemala has no production of GE animals.
- c. **BIOTECHNOLOGY EXPORTS:** Guatemala is not a GE animal exporter.
- d. **BIOTECHNOLOGY IMPORTS:** Guatemala has not imported nor shown interest in importing GE animals.

POLICY

- a. **REGULATION:** Guatemala has not discussed GE animal regulation.
- b. **LABELING AND TRACEABILITY:** Guatemala has not even started to discuss it.
- c. **TRADE BARRIERS:** Guatemala has a de facto moratorium on GE materials, including animals.
- d. **INTELLECTUAL PROPERTY RIGHTS:** Guatemala has no regulations in place for animal IPR.
INTERNATIONAL TREATIES: As member of the WTO, Guatemala reports to the OIE and follows its guidelines.

MARKETING

- a. **MARKET ACCEPTANCE:** There is no awareness at all in relation to GE animals within the Guatemalan society.
- b. **PUBLIC /PRIVATE OPINIONS:** The Academia has shown interest in GE mosquitoes, in response to malaria control, but has not considered raising the inquiry with the government.
- c. **MARKET STUDIES:** No studies performed.

CAPACITY BUILDING AND OUTREACH

- a. **ACTIVITIES:** No activities have been carried out in relation to GE animals.
- b. **STRATEGIES AND NEEDS:** Discussions and capacity building on of GE animals could start at the Veterinary School of the National University.